Information Assurance Career Area

Job Roles

The job roles in the Information Assurance Career Area include the following competencies:

❖ Computer Forensics

<u>Definition</u>: coordinates with Federal, state, local and private sector law enforcement and other computer forensic entities to investigate and resolve issues and crimes where information may be tampered with or information security (INFOSEC) compromised; preserves evidence and restores the information infrastructure.

- 1. Information Security Regulatory Guidance
- 2. Computer Forensics Liaison
- 3. Contingency and Disaster Recovery Tools and Techniques
- 4. Program Management
- 5. Contracting Officer's Representative
- 6. Information Assurance

Encryption

<u>Definition</u>: protects National assets and resources through the use of encryption tools and techniques; formulates encryption and communications security policies and recommendations; protects communications from exploitation by foreign intelligence services; ensures the security of U.S. cryptographic systems, prevents electronic emissions from various communications equipment, and physically protects communications security equipment.

- 1. Encryption Tools and Techniques
- 2. Communications Security
- 3. Information Systems Security Operations
- 4. Encryption/Communications Security Policy
- 5. Architecture
- 6. Program Management
- 7. Contracting Officer's Representative
- 8. Information Assurance

❖ Information System/Network Security

<u>Definition</u>: develops and applies standards, methods, and tools to ensure application of security considerations throughout the life cycle of DoD information systems; manages incident responses, contingency planning, and reconstitution of the information infrastructure.

- 1. Information Systems Security Tools and Techniques
- 2. Information Security/Information Assurance Regulatory Guidance
- 3. Risk Assessment and Mitigation
- 4. Architecture
- 5. Information System Security Operations
- 6. Program Management

- 7. Contracting Officer's Representative
- 8. Information Assurance

Information System Security Management

<u>Definition</u>: manages INFOSEC, operations, technical/administrative evaluation, and oversight for the entire system/network life cycle.

- 1. Information Security/Information Assurance Policy
- 2. Information Systems Security Tools and Techniques
- 3. Information System Security Operations
- 4. Program Management
- 5. Contracting Officer's Representative
- 6. Information Assurance

❖ Policy

<u>Definition</u>: studies and interprets national level policy (promulgated by Congress, Office of Management and Budget, National Institute for Standards and Technology, General Services Administration, the Director of Central Intelligence, and DoD) and integrates it into DON policies.

- 1. Information Security/Information Assurance Policy
- 2. Information System Security Operations
- 3. Information Systems Security Tools and Techniques
- 4. AIS Life Cycle Management
- 5. Risk Assessment and Mitigation
- 6. Program Management
- 7. Contracting Officer's Representative
- 8. Information Assurance

Project Management

<u>Definition</u>: within the Information Assurance area, supports the acquisition of required hardware, software, support systems, and other materials while ensuring the adherence to Federal Law and DoD and DON life cycle management regulations; provides guidance for system oversight, reviews, and milestone approval for DON-managed information system programs; manages contracts and related supplier management functions; performs COR functions.

- 1. Systems Development
- 2. Systems Acquisition
- 3. Information Resource Management
- 4. Risk Management
- 5. Business Development
- 6. Quality Assurance
- 7. Configuration Management
- 8. Program Management
- 9. Contracting Officer's Representative
- 10. Information Assurance

* Research & Development

<u>Definition</u>: conducts basic scientific research and applies research to advanced technologies and prototypes for information assurance-related tools and products.

- 1. Basic Scientific Research
- 2. Applied Research
- 3. Advanced Concept Technology Demonstration
- 4. Requirements Analysis
- 5. Modeling and Simulation
- 6. Program Management
- 7. Contracting Officer's Representative
- 8. Information Assurance

* Risk Management

<u>Definition</u>: evaluates information systems to identify residual risks; assesses the risk to information systems and networks from attack and/or intrusion; recommends safeguards and protections to manage and mitigate risks; documents system security plans, policies, and procedures; performs system security accreditation and certification; often acts as Information System Security Officer (ISSO), Network Security Officer (NSO), Designated Approval Authority (DAA), or similar function.

- 1. Risk Assessment and Mitigation
- 2. Vulnerability Assessment Tools and Techniques
- 3. Information Systems Security Certification
- 4. Information Security/Information Assurance Policy
- 5. Contingency and Disaster Recovery Tools and Techniques
- 6. Architecture
- 7. Network/Systems Security Operations
- 8. AIS Life Cycle Management
- 9. Program Management
- 10. Contracting Officer's Representative
- 11. Information Assurance

Competencies by Job Role

The following table illustrates the breakout of competencies (along the left hand side) by job role (across the top) within this career area:

			icy	ty Management	-k Security			
Competency:	Computer Forensics	Encryption	Information Assurance Policy	Information System Security Management	Information System/Network Security	Project Management	Research and Development	Risk Management
Advanced Concept Technology Demonstration							•	
AIS Life Cycle Management			•		1			•
Applied Research							•	
Architecture		•			•			•
Basic Research					1		•	† †
Business Development					1	•		\dagger
Communications Security		•			1			\dagger
Computer Forensics Liaison	•				1			
Configuration Management					1	•		i i
Contingency and Disaster Recovery Tools and Techniques	•				1			•
Contracting Officers Representative (COR)	•	•	•	•	•	•	•	•
Encryption Tools and Techniques		•						l İ
Encryption/Communications Security Policy		•						
Information Assurance	•	•	•	•	•	•	•	•
Information Resource Management						•		
Information Security/Information Assurance Policy			•	•	İ			•
Information Security/Information Assurance Regulatory Guidance	•				•			
Information Systems Security Certification								•
Information Systems Security Operations		•	•	•	•			
Information Systems Security Tools and Techniques			•	•	•			j i
Modeling and Simulation							•	
Network/Systems Security Operations								•
Program Management	•	•	•	•	•	•	•	•
Quality Assurance					İ	•		i i
Requirements Analysis					1		•	
Risk Assessment and Mitigation			•		•			•

Competency:	Computer Forensics	Encryption	Information Assurance Policy	Information System Security Management	Information System/Network Security	Project Management	Research and Development	Risk Management
Risk Management						•		
Systems Acquisition						•		
Systems Development						•		
Vulnerability Assessment Tools and Techniques								•

Job Roles by Occupational Series

The following table presents a matrix of the occupational series (on the left side) by the job roles in this career area (across the top). It is It is offered as general guidance to help identify where the work performed in the various job roles may be found in the federal government workforce. As such, it does not depict every situation that could occur. More detailed information on the draft classification standard for the Information Technology specialist (GS-2200) can be found in Appendix B of Volume I.

	Computer Forensics	Encryption	Information Systems/Network Security	Information Systems Security Management	Policy	Project Management	Research & Development	Risk Management
GS-340 Program Management				•	•	•		•
GS-343 Management & Program Analysis				•	•	•		•
GS-391 Telecommunications	•	•	•				•	
GS-392 General Telecommunications	•	•	•					
GS-854 Computer Engineer	•	•	•	•	•	•	•	•
GS-855 Electronics Engineer	•	•	•	•	•	•	•	•
GS-856 Electronics Technician		•						
GS-1550 Computer Science	•	•	•	•	•	•	•	•
GS-2210 ¹ IT Management	•	•	•	•	•	•	•	•

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¹ Formerly GS-334 Computer Specialist

Career Area: Information Assurance

1 <u>Competency:</u> Information	Security/Information Assurance Regulatory	<u>Profic</u>		<u>Le</u>	vel:		Skill Topics:	
Strategic Value: To protect National assets and resources; to formulate information systems security recommendations to the Designated Approval Authority (DAA); to guide projects through the life cycle management; to provide user technical assistance; to perform management review, validate security requirements, and meet the DON's requirements within	Learning Objectives: Knowledge of and ability to apply information systems security laws, policies, directives and procedures.	O 1 2 3 4	Required 0 1 2 3 4		_	X X X	X	- Methods/procedures to identify purchase, distribute, and maintain IM/IT assets in a secure manner - System operations life cycle - Network operations life cycle - System/Network certification process using DoD DAA - Applicable Federal, DoD and DON information resource management policies, laws and regulations - Information System security requirements definition - Federal, DoD and DON life cycle management policies - Cryptography
cost and performance requirements.	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J)- NETg Technical Training Courses (all) - Disaster Recovery Planning and Contingency Planning Courses (E, I) - Biometrics training (I, J) - NSA Encryption Courses (E, I) - Legal Courses (J, S) - Evidence Preservation Courses (I, J, S) Work-based: - Develop security plans and/or policies (J, S) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)	Gap Asse	- Currer	nt ncy	=	Gá	ap	

Career Area: Information Assurance

2 <u>Competency:</u> Computer F	orensics Liaison	<u>Profic</u>	<u>iency:</u>	_	Leve	<u>):</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u> <u>I</u>	<u> </u>	<u>S</u>	<u>Ex</u>	- IA/INFOSEC laws, statutes and regulatory guidance
To coordinate with other Federal, state, local and private sector law enforcement and other computer forensic entities to resolve issues; to coordinate and build internal and external consensus for organizational computer forensics program.	Knowledge of information security/information assurance laws, regulations and statutes; ability to coordinate with other Federal, State, Local and private law enforcement agencies in investigating breaches of information assurance.	01234	01234			×	X	- Evidence collection and preservation - Computer viruses - Criminal justice - Cryptography - Intrusion detection
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (S) - NETg Technical Training Courses - Disaster Recovery Planning and Contingency Planning Courses - Biometrics training - NSA Encryption Courses - Legal Courses - Evidence Preservation Courses Work-based: - Develop security plans and/or policies (J, S) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)	Gap Asse	- Currer	псу		Gal	p	

Career Area: Information Assurance

3 Competency: Program Ma	anagement	<u>Profic</u>	iency:		Lev	<u>/el:</u>		Skill Topics:
Strategic Value: To achieve the needed outcomes of a specific program and related projects by ensuring proper management, performance and administration.	Learning Objectives: Knowledge of the required outcomes, functional and political environments, organizations, activities, and constraints affecting a program. Knowledge of project definition and the ability to: relate required results and costs; lead teams that include members not in one's chain of command; apply systematic thinking to develop action plans; develop approaches to satisfy requirements and resolve issues; and ensure overall project quality. A PM has the knowledge and ability to coordinate the work of assigned staff and other functional experts matrixed to support the task.	O 1 2 3 4	Required 0 1 2 3 4	Ε.	_	X X	Ex X	 Program strategic planning Program role in organization/enterprise Visionary leadership Performance assessment Project integration management Quality management Risk management Financial management
	Developmental Opportunities: Learning: - Information Resources Management College: (J, S)Information Management PlanningInformation Technology Acquisition for the CIOIT Project Management - STAR Program (all) - DAWIA (all) Work-based: - Serve as Contracting Officer's Representative (J, S) - Serve as project engineer or project manager (J)	Gap Asse Required Proficiency	- Currer	nt :	=	Ga	p	

Career Area: Information Assurance

4 <u>Competency:</u> Contracting	Officers Representative (COR)	<u>Profic</u>	iency:		Lev	el:		Skill Topics:
Strategic Value: To ensure contractor performance and delivery is in compliance with a given contract.	Learning Objectives: Knowledge of and ability to make technical decisions within the scope of the contract/task; serve as the day-to-day point of contact for contractual matters; assess the technical quality of performed work; approve deliverables for acceptance.	O 1 2 3 4	Required 0 1 2 3 4		_	X X	Ex	- Deliverable item review and approval - Contract types (e.g., IDIQ, cost reimbursable, time and materials, firm fixed price) - Cost reporting - Contract rates - Delivery orders - Other direct costs (ODCs) - Contract Line Items (CLINs) - Contract milestones - Life cycle management - Statements of Work (SOW) - Contract options
	Developmental Opportunities: Learning: - STAR Program (all) - DAWIA (all)	Gap Asservation	- Curren	nt :	=	Gá	ар	

Career Area: Information Assurance

5 <u>Competency:</u> Information	n Assurance	<u>Profic</u>	iency:		Lev	<u>'el:</u>		Skill Topics:
Strategic Value: To acquire, maintain and ensure the security of information systems in an effective, interoperable, scalable, reliable, integrated and affordable fashion.	Learning Objectives: Knowledge of and ability to apply physical access controls, technical security countermeasures, classification and safeguarding of controlled information and operational & industrial security. Ability to validate that appropriate countermeasures are being integrated correctly into program and to ensure that assurance evidence that demonstrates that the system is secure are produced.		Required 0 1 2 3 4	_	1 x 2	_	S EX	- Information Systems Security - National Level IM/IT Policy - Trusted Systems - Discretionary and Mandatory Access Control - Identification and Authentication - Common criteria, DITSCAP - Assurance Evidence
	Developmental Opportunities: Learning: - NETg Technical Training Courses (all) Work-based: - Partnering with Industry (all)	Gap Asse	- Currer	ncy	= =	G	Sap	

Career Area: Information Assurance

6 <u>Competency:</u> Contingence	y and Disaster Recovery Tools and Techniques	<u>Profic</u>	iency:		Leve	<u>el:</u>		Skill Topics:
Strategic Value: To define and implement strategies for contingency and disaster recovery, preservation of electronic evidence, data recovery and continuity of operations plans for information systems.	Learning Objectives: Knowledge of and ability to use tools and techniques used in data recovery and preservation of electronic evidence (for example, chain of evidence rules).	O 1 2 3 4	Required 0 1 2 3 4	_	_	_	X	- Computer forensics tools - Data recovery - Evidence preservation - Continuity of operations - Viruses - Operating systems - Attack tools - Network protocols
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - Disaster Recovery Planning and Contingency Planning Courses (E, I) - Biometrics training (I, J) - NSA Encryption Courses (E, I) - Legal Courses (J, S) - Evidence Preservation Courses (I, J, S) Work-based: - Develop security plans and/or policies (J, S) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)	Gap Asse	- Currer	ncy		Ga	p	

Career Area: Information Assurance

1 Competency: Encryption 1	Tools and Techniques	Profic	iency:		<u>Le</u>	evel:	<u>:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	Ī	Ī	<u>S</u>	<u>Ex</u>	- PKI - Symmetric and asymmetric key
To integrate encryption into multiple applications and technologies.	Knowledge of and ability to design, support and integrate encryption techniques across multiple platforms.	01234	01234	X	X	X	X		- Cryptographic/encryption standards, products and protocols - Digital signatures - VPNs - Smart Cards - Ipsec - Secure Sockets Layer
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - IAVA Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I)	Gap Asse	SSMENT: - Currer Proficient	ncy	= =	_	Gap		
	Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform/assist in security certification and accreditation (I, J) - Partnering with Industry (all)								

Career Area: Information Assurance

Job Role. Literyption	31									
2 <u>Competency:</u> Communica	tions Security	<u>Profic</u>	<u>iency:</u>		<u>Le</u>	<u>vel:</u>		Skill Topics:		
Strategic Value:	<u>Learning Objectives:</u>	Current	Required	<u>E</u>	1	_	<u>Ex</u>	accounting, inventory and transport		
To protect communications from exploitation by foreign intelligence services; to ensure the security of U.S. cryptosystems, prevent electronic emissions from various communications equipment, and to physically protect communications security equipment.	Knowledge of and ability to apply communications security tools and practices to protect information systems, data and networks.	01234	01234	X	X	X		- COMSEC vulnerability analysis - Security, management and inspection requirements - Cryptographic systems - Electronic key management - STU III management		
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - IAVA Training (E, I)	Gap Asse	- ————————————————————————————————————	ncy	=	Gi	ap			
	- INFOCON Training (E, I) - EKMS Course (E, I) Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform/assist in security certification and accreditation (I, J) - Partnering with Industry (all)									

Career Area: Information Assurance

3 <u>Competency:</u> Information	Systems Security Operations	<u>Profic</u>	iency:		<u>Le</u>	evel:	<u>:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	1	Ī	<u>S</u>	<u>Ex</u>	
To ensure that security is provided for and implemented throughout the life cycle of an information system and/or network from the concept development phase through the design, development, operation, maintenance, and security disposal phases.	Knowledge of and ability to develop, evaluate, coordinate, and disseminate security tools and procedures.	01234	01234	X	X	X	X		 Information systems modeling methods Capacity planning Migration strategy development Customer information system planning assistance Customer information system design assistance Customer information system modification assistance Change management and control processes Development and maintenance tools Release package planning and status accounting
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - INFOCON Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I) Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform/assist in security certification and accreditation (I, J)	Gap Asse Required Proficiency	ssment: - Currer Proficien	nt ncy	=	_	Gap)	 Documentation audits and reviews Asset management tools Configuration management history Human factors practices Network security issues Network performance monitoring Cryptography

Career Area: Information Assurance

Communications Security Policy	Profic	iency:	<u>Level:</u>		<u>Level:</u>		<u>Level:</u>		<u>Level:</u>		<u>Level:</u>		<u>Level:</u>		<u>Level</u>		<u>Level:</u>		Level:			Skill Topics:
Learning Objectives:	Current	Required	<u>E</u>	<u>l</u>	<u>J</u>	<u>S</u>	<u>Ex</u>															
Knowledge of and ability to apply encryption and communications security laws, policies, directives, regulations, guidance and procedures.	01234	01234	×	X	X	X	X	purchase, distribute, and maintain IM/IT assets in a secure manner - System operations life cycle - Network operations life cycle - System/Network certification process using DoD DAA - Applicable Federal, DoD and DON information resource management policies, laws and regulations - Federal, DoD and DON life cycle management policies - Cryptography - System/Network vulnerabilities - Communications security (COMSEC)														
Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - IAVA Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I) Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S)	Required Proficiency	- Currer Proficier	nt :		G	ìар																
	Knowledge of and ability to apply encryption and communications security laws, policies, directives, regulations, guidance and procedures. Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - INFOCON Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I) - Work-based:	Learning Objectives: Knowledge of and ability to apply encryption and communications security laws, policies, directives, regulations, guidance and procedures. Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - INFOCON Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I) - Develop security Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform/assist in security certification and accreditation (I, J)	Learning Objectives: Knowledge of and ability to apply encryption and communications security laws, policies, directives, regulations, guidance and procedures. Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSYT Course (I, J) - NSA TEMPEST Course (E, I) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - IAVA Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I) - Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform/assist in security certification and accreditation (I, J)	Learning Objectives: Knowledge of and ability to apply encryption and communications security laws, policies, directives, regulations, guidance and procedures. Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - IAVA Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I) - Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform/assist in security certification and accreditation (I, J)	Learning Objectives: Knowledge of and ability to apply encryption and communications security laws, policies, directives, regulations, guidance and procedures. Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - INFOCON Training (E, I) - INFOCON Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I) - Oconduct/assist system risk assessments (I, J) - Perform/assist in security certification and accreditation (I, J)	Learning Objectives: Knowledge of and ability to apply encryption and communications security laws, policies, directives, regulations, guidance and procedures. Developmental Opportunities: Learning: Information Resources Management College, Managing Information Security in a Networked Environment (all) INET grechnical Training Courses (all) ISA Course (E, I) INSY Course (I, I) INSY Course (I, I) CISN Training Pipeline (all) Personnel Security Courses (E, I) IAVA Training (E, I) INFOCON Training (E, I) INFOCON Training (E, I) Serve as/assist Information System Security Officer (J) Develop security plans and/or policies (J, S) Conduct/assist system risk assessments (I, J) Perform/assist in security certification and accreditation (I, J)	Learning Objectives: Knowledge of and ability to apply encryption and communications security laws, policies, directives, regulations, guidance and procedures. Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - IAVA Training (E, I) - INFOCON Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I) - Overlop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform/assist in security certification and accreditation (I, J)	Learning Objectives: Knowledge of and ability to apply encryption and communications security laws, policies, directives, regulations, guidance and procedures. Developmental Opportunities: Learning: Information Resources Management College, Managing Information Security in a Networked Environment (all) NETG Technical Training Courses (all) ISA Course (I, I) NSYT Course (I, I) NSYT Course (I, I) Personnel Security Courses (E, I) INAVA Training Pipeline (all) Personnel Security Courses (E, I) INAVA Training (E, I) INFOCON Training (E, I) EKMS Course (E, I) Work-based: Serve as/assist Information System Security Officer (J) Develop security plans and/or policies (J, S) Conduct/assist system risk assessments (I, J) Perform/assist in security certification and accreditation (I, J)														

Career Area: Information Assurance

5 Competency: Architecture		Profic	iency:		Le	vel:		Skill Tonics:
Strategic Value: To develop and maintain secure information systems and networks that are effective,	Learning Objectives: Understanding the operational, systems and technical views of the architecture framework endorsed by DoD, and their application in computer and information systems components.	Current	Required 0 1 2 3 4	_	1		S EX	- C4ISR architecture framework
interoperable, integrated and affordable.							hardware components and configuration - Database management - Distributed processing - Operating Systems - Networks - Systems software - Technical Standardstheir role and specific standards in use and adopted by DoD and DON - Cryptographic equipment and	
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - Information Resources Management College, Managing Information Architectures and Infrastructures (all) - NETg Technical Training Courses (all)	Gap Asse	ssment: - Currer Proficier		=	 G	 Sap	systems - DoD Security Architecture (MSL) - Cryptography
	Work-based: - Include AIS Security controls during system development (I) - Analyze security software, hardware support tools (I) - Partnering with Industry (all)	Gap Mitig	ation Strate	egy:				

Career Area: Information Assurance

6 Competency: Program Ma		<u>Profic</u>	iency:		<u>Lev</u>	<u>/el:</u>		Skill Topics:
Strategic Value: To achieve the needed	Learning Objectives: Knowledge of the required outcomes, functional and political environments, organizations, activities, and constraints affecting	Current 0 1 2 3 4	Required 0 1 2 3 4	<u>E</u>	_	X X	S <u>Ex</u>	- Program strategic planning - Program role in organization/enterprise
outcomes of a specific program and related projects by ensuring proper management, performance and administration.	environments, organizations, activities, and constraints affecting a program. Knowledge of project definition and the ability to: relate required results and costs; lead teams that include members not in one's chain of command; apply systematic							 Visionary leadership Performance assessment Project integration management Quality management Risk management Financial management
	Developmental Opportunities: Learning: - Information Resources Management College: (J, S)Information Management PlanningInformation Technology Acquisition for the CIOIT Project Management - STAR Program (all) - DAWIA (all)	Gap Asse Required Proficiency	- Currer		=	Ga	<u>—</u> ар	
	Work-based: - Serve as Contracting Officer's Representative (J, S) - Serve as project engineer or project manager (J)	<u>Gap Mitig</u>	ation Strate	egy:				

Career Area: Information Assurance

7 Competency: Contracting	Officers Representative (COR)	<u>Profic</u>	iency:		Lev	<u>'el:</u>		Skill Topics:
Strategic Value: To ensure contractor performance and delivery is in compliance with a given contract.	Learning Objectives: Knowledge of and ability to make technical decisions within the scope of the contract/task; serve as the day-to-day point of contact for contractual matters; assess the technical quality of performed work; approve deliverables for acceptance.	O 1 2 3 4	Required 0 1 2 3 4		_	X X	S Ex	- Deliverable item review and approval - Contract types (e.g., IDIQ, cost reimbursable, time and materials, firm fixed price) - Cost reporting - Contract rates - Delivery orders - Other direct costs (ODCs) - Contract Line Items (CLINs) - Contract milestones - Life cycle management - Statements of Work (SOW) - Contract options
	Developmental Opportunities: Learning: - STAR Program (all) - DAWIA (all)	Gap Asse Required Proficiency	ssment: - Curren Proficier	nt :	=	Gá	ар	

Career Area: Information Assurance

Job Role. Literyption					_	_		_	
8 <u>Competency:</u> Information	n Assurance	<u>Profic</u>	<u>iency:</u>		<u>Le</u>	<u>vel:</u>			Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	1	<u>J</u>	<u>S</u> <u>E</u>	<u>Ex</u>	- Information Systems Security - National Level IM/IT Policy
To acquire, maintain and ensure the security of information systems in an effective, interoperable, scalable, reliable, integrated and affordable fashion.	Knowledge of and ability to apply physical access controls, technical security countermeasures, classification and safeguarding of controlled information and operational & industrial security. Ability to validate that appropriate countermeasures are being integrated correctly into program and to ensure that assurance evidence that demonstrates that the system is secure are produced.	01234	01234	×	X	X	X	X	- Trusted Systems - Discretionary and Mandatory Access Control - Identification and Authentication - Common criteria, DITSCAP - Assurance Evidence
	Developmental Opportunities: Learning: - NETg Technical Training Courses (all)	Gap Asse	essment:		=				
	Work-based: - Partnering with Industry (all)	Required Proficiency	Currer Proficie		=	(Gap		
		Gap Mitig	ation Strate	egy:					

Career Area: Information Assurance

1 <u>Competency:</u> Information	Security/Information Assurance Policy	<u>Profic</u>	iency:		<u>Le</u> \	vel:		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u> .	<u>l</u>	<u> 7</u>	<u> Ex</u>	
To protect National assets and resources; to formulate information systems security policies and recommendations to the Designated Approval Authority (DAA); to guide projects through the life cycle management; to provide user technical assistance; to perform management review, validate security requirements, and meet the DON's requirements within cost and performance	Knowledge of and ability to apply information systems security laws, policies, directives, regulations, guidance and procedures.	01234	01234	X	×	X	X	purchase, distribute, and maintain IM/IT assets in a secure manner - System operations life cycle - Network operations life cycle - System/Network certification process using DoD DAA - Applicable Federal, DoD and DON information resource management policies, laws and regulations - Information System security requirements definition- Federal, DoD and DON life cycle management policies - Cryptography - System/Network vulnerabilities - Technical Writing
cost and performance requirements.	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - CIP Courses (all) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - Networking Courses (E, I, J) Work-based: - Serve as Policy Analyst (E, I, J) - Serve on CNO Staff (J, S) - Develop security plans and/or policies (J, S) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)	Gap Asse ——— Required Proficiency Gap Mitiga	ssment: - Currer Proficier	nt =	=	G	ap	

Career Area: Information Assurance

Job Role. Illioillatio							
2 <u>Competency:</u> Information	Systems Security Operations	<u>Proficier</u>	ncy:	L	<u>evel:</u>		Skill Topics:
Strategic Value: To ensure that security is provided for and implemented throughout the life cycle of an information system and/or network from the concept development phase through the design, development, operation, maintenance, and security disposal phases.	Learning Objectives: Knowledge of and ability to develop, evaluate, coordinate, and disseminate security tools and procedures.		Required 0 1 2 3 4	<u>Е</u> 1	x x	S Ex	- Information systems modeling methods - Capacity planning - Migration strategy development - Customer information system planning assistance - Customer information system design assistance - Customer information system modification assistance - Change management and control processes - Development and maintenance tools - Release package planning and status accounting
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - CIP Courses (all) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - Networking Courses (E, I, J) Work-based: - Serve as Policy Analyst (E, I, J) - Serve on CNO Staff (J, S) - Develop security plans and/or policies (J, S) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)	Gap Assess Required Proficiency Gap Mitigation	Curren Proficien	ncy		Gap	 Documentation audits and reviews Asset management tools Configuration management history Human factors practices Network security issues Network performance monitoring Cryptography

Career Area: Information Assurance

3 <u>Competency:</u> Information	n Systems Security Tools and Techniques	Profic	iency:		<u>Le</u>	evel	<u>:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	Ī	<u>J</u>	<u>S</u>	<u>Ex</u>	
To protect information systems from attack and/or intrusion; to ensure proper access to information systems and their resources.	Knowledge of and ability to use basic tools and techniques to protect information systems.		X	X			 Files/filesystem security Encryption/Cryptography Network security Network servers Administration tools Limiting and monitoring tools Security software Computer viruses 		
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (all) - NETg Technical Training Courses (all) - CIP Courses (all) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - Networking Courses (E, I, J) Work-based: - Serve as Policy Analyst (E, I, J)	Gap Asse Required Proficiency Gap Mitiga	ssment: Currer Proficien	ncy	=	_	Gap)	
	 Serve on CNO Staff (J, S) Develop security plans and/or policies (J, S) Perform or assist in system security certification and accreditation (I, J) Partnering with Industry (all) 								

Career Area: Information Assurance

4 Competency: AIS Life Cyc	cle Management	<u>Profic</u>	iency:		<u>Leve</u>	<u>el:</u>		Skill Topics:
Strategic Value: To ensure adherence to Federal law and DOD Life Cycle regulations in the acquisition, maintenance, operation and disposal of required hardware, support services and other materials.	Learning Objectives: Ability to acquire required hardware, software, support services and other materials.	O 1 2 3 4	Required 0 1 2 3 4		X X	_	_	 Project Planning AIS Life Cycle Managemen Security policies, standards, methodologies and tools Cryptography
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (I, J) - Information Resources Management College, Information Management Planning (S) - NETg Technical Training Courses (all) - CIP Courses (all) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - Networking Courses (E, I, J) Work-based: - Serve as Policy Analyst (E, I, J) - Serve on CNO Staff (J, S) - Develop security plans and/or policies (J, S) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)	Gap Asse	- Currer	nt =	=	Ga	p	

Career Area: Information Assurance

E Competency: Dick Access	5 Competency: Risk Assessment and Mitigation Proficiency:							
competency: RISK ASSESSI	ment and witigation	Profic	iency:		re,	<u>vel:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	Ī	<u>J</u> :	S Ex	- Cross functional security disciplines (technical,
To evaluate information systems to identify residual risks to make recommendations to meet the appropriate organizational security requirements.	Knowledge of and ability to use methods and tools used for risk assessment and mitigation of risk to information systems and data.	01234	01234	X	X	X	XX	administrative, personnel, physical) - Risk management policies and procedures - Hardware/software risks and vulnerabilities - Risk management methods and tools
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - CIP Courses (all) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - Networking Courses (E, I, J)	Gap Asse	- Currer		=	— G	<u> </u>	
	Work-based: - Serve as Policy Analyst (E, I, J) - Serve on CNO Staff (J, S) - Develop security plans and/or policies (J, S) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)	<u>Gap Mitig</u>	ation Strate	egy:				

Career Area: Information Assurance

6 <u>Competency:</u> Program Ma	anagement	<u>Profic</u>	iency:		<u>Lev</u>	<u>/el:</u>		Skill Topics:
Strategic Value: To achieve the needed outcomes of a specific program and related projects by ensuring proper management, performance and administration.	Learning Objectives: Knowledge of the required outcomes, functional and political environments, organizations, activities, and constraints affecting a program. Knowledge of project definition and the ability to: relate required results and costs; lead teams that include members not in one's chain of command; apply systematic thinking to develop action plans; develop approaches to satisfy requirements and resolve issues; and ensure overall project quality. A PM has the knowledge and ability to coordinate the work of assigned staff and other functional experts matrixed to support the task.	O 1 2 3 4	Required 0 1 2 3 4	Ε.	_	X X X	Ex X	 Program strategic planning Program role in organization/enterprise Visionary leadership Performance assessment Project integration management Quality management Risk management Financial management
	Developmental Opportunities: Learning: - Information Resources Management College: (J, S)Information Management PlanningInformation Technology Acquisition for the CIOIT Project Management - STAR Program (all) - DAWIA (all) Work-based: - Serve as Contracting Officer's Representative (J, S) - Serve as project engineer or project manager (J)	Gap Asse Required Proficiency	- Currer	nt :	=	Ga	p	

Career Area: Information Assurance

7 Competency: Contracting	Officers Representative (COR)	<u>Profic</u>	iency:		Le	evel	<u>:</u>		Skill Topics:
Strategic Value:	<u>Learning Objectives:</u>	Current	Required	<u>E</u>	Ī	<u>J</u>	<u>S</u>	<u>Ex</u>	- Deliverable item review and
To ensure contractor performance and delivery is in compliance with a given contract.	Knowledge of and ability to make technical decisions within the scope of the contract/task; serve as the day-to-day point of contact for contractual matters; assess the technical quality of performed work; approve deliverables for acceptance.	01234	01234		X	X	X		approval- Contract types (e.g., IDIQ, cost reimbursable, time and materials, firm fixed price) - Cost reporting - Contract rates - Delivery orders - Other direct costs (ODCs) - Contract Line Items (CLINs) - Contract milestones - Life cycle management - Statements of Work (SOW) - Contract options
	Developmental Opportunities: Learning: - STAR Program (all) - DAWIA (all)	Gap Asse	ssment: - - Currer Proficier		=	=	Gap	-	
		Gap Mitiga	ation Strate	egy:					

Career Area: Information Assurance

8 <u>Competency:</u> Information	Assurance	<u>Profic</u>	iency:	<u>Level:</u>				Skill Topics:	
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	1	<u>J</u>	<u>S</u> <u>E</u> :		
To acquire, maintain and ensure the security of information systems in an effective, interoperable, scalable, reliable, integrated and affordable fashion.	Knowledge of and ability to apply physical access controls, technical security countermeasures, classification and safeguarding of controlled information and operational & industrial security. Ability to validate that appropriate countermeasures are being integrated correctly into program and to ensure that assurance evidence that demonstrates that the system is secure are produced.	01234	01234	X	X	X	×	- Trusted Systems - Discretionary and Mandatory Access Control - Identification and Authentication - Common criteria, DITSCAP - Assurance Evidence	
	<u>Developmental Opportunities:</u> Learning: - NETg Technical Training Courses (all)	Gap Asse	ssment:		=				
	Work-based: - Partnering with Industry (all)	Required Proficiency	- Currer Proficier		=	G	iap		
		Gap Mitiga	ation Strate	egy:					

Career Area: Information Assurance

1 Competency: Information Security/Information Assurance Policy Proficiency: Level									CLULT '
<u>competency:</u> Information	r security/information Assurance Policy	Profic	iency:		LE	ever:	-		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	1	Ţ	<u>S</u>	<u>Ex</u>	- Methods/procedures to identify purchase, distribute, and maintain
To protect National assets and resources; to formulate information systems security policies and recommendations to the Designated Approval Authority (DAA); to guide projects through the life cycle management; to provide user technical assistance; to perform management review, validate security requirements, and meet the DON's requirements within cost and performance	Knowledge of and ability to apply information systems security laws, policies, directives, regulations, guidance and procedures.	01234		X	X	X	X	X	IM/IT assets in a secure manner - System operations life cycle - Network operations life cycle - System/Network certification process using DoD DAA - Applicable Federal, DoD and DON information resource management policies, laws and regulations - Information System security requirements definition - Federal, DoD and DON life cycle management policies - Cryptography - System/Network vulnerabilities
requirements.	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - INFOCON Training (E, I) - INFOCON Training (E, I) - EKMS Course (E, I) Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform/assist in security certification and accreditation (I, J)	Gap Asse	- Currer	ncy	= =		Gap		

Career Area: Information Assurance

2 <u>Competency:</u> Informatio	n Systems Security Tools and Techniques	<u>Profic</u>	iency:		<u>Le</u>	vel:		Skill Topics:
Strategic Value: To protect information systems from attack and/or intrusion; to ensure proper access to information systems and their resources.	Learning Objectives: Knowledge of and ability to use tools and techniques to protect information systems.	O 1 2 3 4	Required 0 1 2 3 4			X	S Ex	- Physical and boot security - Authentication - Files/filesystem security - Encryption/Cryptography - Network security - Network servers - Firewalling - IPSec - VPNs - Administration, limiting and monitoring tools - Logging - Attack detection, intrusion testing - Security software - Viruses - Performing backups
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - INFOCON Training (E, I) - INFOCON Training (E, I) - DITSCAP Course (E) Work-based: - Serve as or assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct or assist in system risk assessments (I, J) - Perform/assist security certification and accreditation (I, J) - Partnering with Industry (all)	Gap Asse	- Currer	ncy	= =	G	ap	

Career Area: Information Assurance

3 <u>Competency:</u> Information	n Systems Security Operations	Profic	iency:	<u>Level:</u>			_		Skill Topics:
Strategic Value: To ensure that security is	Learning Objectives: Knowledge of and ability to develop, evaluate, coordinate, and	Current 0 1 2 3 4	Required 0 1 2 3 4		Ι	χ	_	<u>Ex</u>	Information systems modeling methods Capacity planning
provided for and implemented throughout the life cycle of an information system and/or network from the concept development phase through the design, development, operation, maintenance, and security disposal phases.	disseminate security tools and procedures.								 Migration strategy development Customer information system planning assistance Customer information system design assistance Customer information system modification assistance Change management and control processes Development and maintenance tools Release package planning and status accounting Documentation audits and reviews Asset management tools
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all)	Gap Asse Required Proficiency	- Currer	=			Gap	-	- Configuration management history - Human factors practices - Network security issues - Network performance monitoring - Cryptography
	- NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - IAVA Training (E, I) - INFOCON Training (E, I)	Gap Mitigation Strategy:							
	Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct or assist in system risk assessments (I, J) - Perform/assist security certification and accreditation (I, J) - Partnering with Industry (all)								

Career Area: Information Assurance

4 <u>Competency:</u> Program Ma	anagement	<u>Profic</u>	iency:		<u>Le</u>	vel:		Skill Topics:
Strategic Value: To achieve the needed outcomes of a specific program and related projects by ensuring proper management, performance and administration.	Learning Objectives: Knowledge of the required outcomes, functional and political environments, organizations, activities, and constraints affecting a program. Knowledge of project definition and the ability to: relate required results and costs; lead teams that include members not in one's chain of command; apply systematic thinking to develop action plans; develop approaches to satisfy requirements and resolve issues; and ensure overall project	Current 0 1 2 3 4	Required 0 1 2 3 4	<u>E</u>		X	<u>S</u> <u>E</u> :	- Program strategic planning - Program role in
requirements and resolve issues; and ensure overall project quality. A PM has the knowledge and ability to coordinate the work of assigned staff and other functional experts matrixed to support the task.		Gap Asse	essment:					
	- Information Resources Management College: (J, S)Information Management PlanningInformation Technology Acquisition for the CIOIT Project Management - STAR Program (all) - DAWIA (all)	Required Proficiency Gap Mitig	Currer Proficien ation Strate	ncy	Sap			

Career Area: Information Assurance

des Objective				<u>Level:</u>			Skill Topics:		
ning Objectives: edge of and ability to make technical decisions within the		Required 0 1 2 3 4	_	_	_	<u>Ex</u>	- Deliverable item review and approval - Contract types (e.g., IDIQ, cost		
of the contract/task; serve as the day-to-day point of t for contractual matters; assess the technical quality of med work; approve deliverables for acceptance.							reimbursable, time and materials, firm fixed price) - Cost reporting - Contract rates - Delivery orders - Other direct costs (ODCs) - Contract Line Items (CLINs) - Contract milestones - Life cycle management - Statements of Work (SOW) - Contract options		
lopmental Opportunities: ng: R Program (all) (IA (all)	Gap Asse	- Curren	nt	=		 ар			
	Gap Mitiga	ation Strate	egy:						
of it for me	the contract/task; serve as the day-to-day point of for contractual matters; assess the technical quality of ed work; approve deliverables for acceptance. pmental Opportunities: crogram (all)	pmental Opportunities: : : : : : : : : : : : : : : : : : :	pmental Opportunities: : rrogram (all) (all) Required _ Currer Proficiency _ Proficie	the contract/task; serve as the day-to-day point of for contractual matters; assess the technical quality of ed work; approve deliverables for acceptance. pmental Opportunities: trogram (all) (all) Gap Assessment: Required _ Current	the contract/task; serve as the day-to-day point of for contractual matters; assess the technical quality of ed work; approve deliverables for acceptance. Cap Assessment:	the contract/task; serve as the day-to-day point of for contractual matters; assess the technical quality of ed work; approve deliverables for acceptance. Gap Assessment: Frogram (all) Frogram (all) Frogram (all) Required Current Gap Assessment C	the contract/task; serve as the day-to-day point of for contractual matters; assess the technical quality of ed work; approve deliverables for acceptance. Gap Assessment:		

Career Area: Information Assurance

6 Competency: Information	Assurance	Profic	iency:	<u>Level:</u>					OL III T							
competency. Information	i Assurance	<u>11011C</u>	Terrey.											Skill Topics:		
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	Ī	<u>J</u>	<u>S</u> !	<u>Ex</u>	- Information Systems Security - National Level IM/IT Policy							
To acquire, maintain and ensure the security of information systems in an effective, interoperable, scalable, reliable, integrated and affordable fashion.	Knowledge of and ability to apply physical access controls, technical security countermeasures, classification and safeguarding of controlled information and operational & industrial security. Ability to validate that appropriate countermeasures are being integrated correctly into program and to ensure that assurance evidence that demonstrates that the system is secure are produced.	01234	01234	×	X	X	X	X	- Trusted Systems - Discretionary and Mandatory Access Control - Identification and Authentication - Common criteria, DITSCAP - Assurance Evidence							
	<u>Developmental Opportunities:</u> Learning: - NETg Technical Training Courses (all)	Gap Asse	essment:		=											
	Work-based: - Partnering with Industry (all)	Required Proficiency	_ Currer Proficie		=	(Gap									
		Gap Mitig	ation Strate	<u>egy:</u>												

Career Area: Information Assurance

Job Role: Information System/Network Security

1 Competency: Information	n Systems Security Tools and Techniques	Profic	iency:		<u>Le</u>	evel	<u>:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	1	Ī	<u>S</u>	<u>Ex</u>	- Physical and boot security
To protect information systems from attack and/or intrusion; to ensure proper access to information systems and their resources.	Knowledge of and ability to use tools and techniques to protect information systems.	01234	01234	X	X	X			- Authentication- Files/filesystem security - Encryption/Cryptography - Network security, network servers, firewalling - IPSec - VPNs - Administration tools - Limiting and monitoring tools, logging - Attack detection - Intrusion testing - Security software - Computer viruses - Performing backups
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (all) - NETG Technical Training Courses (all) - ISA Course (E, I)- NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - INFOCON Training (E, I)	Gap Asse Required Proficiency Gap Mitiga	- Currer	nt ncy	=	_	Gap)	
	Work-based: - Serve as/assist Information System Security Officer (J) - Serve as LAN administrator/security administrator (E, I) - Develop security plans/policies (J, S) - Conduct or assist in system risk assessments (I, J) - Perform/assist security certification and accreditation (I, J) - Partnering with Industry (all)								

Career Area: Information Assurance

Job Role: Information System/Network Security

	n Security/Information Assurance Regulatory	Profic	iency:		Le	vel:		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>		<u>J</u> :	S Ex	_
To protect National assets and resources; to formulate information systems security recommendations to the Designated Approval Authority (DAA); to guide projects through the life cycle management; to provide user technical assistance; to	Knowledge of and ability to apply information systems security laws, policies, directives and procedures.	0 1 2 3 4			_		X	purchase, distribute, and maintain IM/IT assets in a secure manner - System operations life cycle - Network operations life cycle - System/Network certification process using DoD DAA - Applicable Federal, DoD and DON information resource management policies, laws and regulations - information System security requirements definition - Federal, DoD and DON life cycle management policies- Cryptography
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (E, I, J) - NETg Technical Training Courses - ISA Course - NSVT Course - CISN Training Pipeline - Navy IA Training - IAVA Training - INFOCON Training - NSA TEMPEST course - DITSCAP course	Gap Asse Required Proficiency	- ————————————————————————————————————	ency				
	Work-based: - Serve as ISSO/ISSM (J) - Serve as LAN administrator/LAN security administrator (E, I) - Develop security plans and/or policies (J, S) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)							

Career Area: Information Assurance

3 <u>Competency:</u> Risk Assess	ment and Mitigation	<u>Profic</u>	iency:		<u>Le</u>	vel:			Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	Ī	<u>J</u>	<u>S</u> .	<u>Ex</u>	- Cross functional security disciplines (technical,
To evaluate information systems to identify residual risks to make recommendations to meet the appropriate organizational security requirements.	Knowledge of and ability to use methods and tools used for risk assessment and mitigation of risk to information systems and data.	01234	01234	X	X	X	X	X	administrative, personnel, physical) - Risk management policies and procedures - Hardware/software risks and vulnerabilities - Risk management methods and tools
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (E, I, J) - NETg Technical Training Courses (Certification & Accreditation) (all) - NSA TEMPEST Course (E, I) - DITSCAP Course (E)	Gap Asse	essment: - Currer Proficier		=		Gap		
	 CISN Training Pipeline (all) Navy IA Training (E, I, J) INFOCON Training (E, I) Disaster Recovery Training (E, I) 	Gap Mitiga	ation Strate	egy:					
	Work-based: - Serve as ISSO/ISSM (J) - Serve as LAN administrator/security administrator (E, I) - Include AIS security controls during system development (I) - Analyze security software, hardware support tools (I) - Conduct/assist system risk assessments (I, J) - Conduct system vulnerability tests (J) - Perform/assist security certification and accreditation (I, J) - Partnering with Industry (all)								

Career Area: Information Assurance

300 Role: Illioinlatio							
4 <u>Competency:</u> Architecture	e	<u>Profic</u>	<u>iency:</u>	<u>L</u>	<u>evel</u>	<u>:</u>	Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u> <u>I</u>	<u>J</u>	<u>S</u> <u>E</u>	- OMB Memo M-97-16 - C4ISR architecture framework
To develop and maintain secure information systems and networks that are effective, interoperable, integrated and affordable.	Understanding the operational, systems and technical views of the architecture framework endorsed by DoD, and their application in computer and information systems components.	01234	01234	x x	X	X	 Process modeling Data interchange services Computer systems architecture System design, including hardware components and configuration Database management Distributed processing Operating Systems- Networks Systems software Technical Standardstheir role and specific standards in use and adopted by DoD and DON Cryptographic equipment and systems
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (E, I, J) - Information Resources Management College, Managing Information Architectures and Infrastructures (all) - NETg Technical Training Courses (all)	Gap Asse	essment: Currer Proficier		=	Gap	- DoD Security Architecture (MSL) - Cryptography
	Work-based: - Serve as ISSO/ISSM (J) - Serve as LAN administrator/LAN security administrator (E, I) - Include AIS Security controls during system development (I) - Analyze security software, hardware support tools (I) - Partnering with Industry (all)	Gap Mitig	ation Strate	egy:			

Career Area: Information Assurance

	in Systems Network Security						
5 <u>Competency:</u> Information	Systems Security Operations	Profic	<u>iency:</u>	<u>l</u>	<u>evel</u>	<u>:</u>	Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u> <u>I</u>	<u> </u>	<u>S</u> <u>E</u>	-X - Information systems modeling methods
To ensure that security is provided for and implemented throughout the life cycle of an information system and/or network from the concept development phase through the design, development, operation, maintenance, and security disposal p	Knowledge of and ability to develop, evaluate, coordinate, and disseminate security tools and procedures.	01234	01234	X	X	X	 Capacity planning Migration strategy development Customer IS planning, design and modification assistance Change management and control processes Development and maintenance tools Release package planning and status accounting Documentation audits and reviews Asset management tools Configuration management history Human factors practices Network security issues,
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security in a Networked Environment (E, I, J) - NETg Technical Training Courses (all) - ISA Course (E, I)- NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - Physical Security Courses (E, I)	Gap Asse	- Currer	ncy	_	Gap	performance monitoring - Cryptography
	- IAVA Training (E, I) - INFOCON Training (E, I) Work-based: - Serve as/assist Information System Security Officer (J) - Serve as LAN administrator/LAN security administrator (E, I) - Develop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)						

Career Area: Information Assurance

6 Competency: Program M	anagement	<u>Profic</u>	iency:		<u>Lev</u>	<u>/el:</u>		Skill Topics:
Strategic Value: To achieve the needed outcomes of a specific program and related projects by ensuring proper management, performance and administration.	Learning Objectives: Knowledge of the required outcomes, functional and political environments, organizations, activities, and constraints affecting a program. Knowledge of project definition and the ability to: relate required results and costs; lead teams that include members not in one's chain of command; apply systematic thinking to develop action plans; develop approaches to satisfy requirements and resolve issues; and ensure overall project quality. A PM has the knowledge and ability to coordinate the work of assigned staff and other functional experts matrixed to support the task.	O 1 2 3 4	Required 0 1 2 3 4	E	_	X X	_	 Program strategic planning Program role in Organization/enterprise Visionary leadership Performance assessment Project integration management Quality management Risk management Financial management
	Developmental Opportunities: Learning: - Information Resources Management College: (J, S)Information Management PlanningInformation Technology Acquisition for the CIOIT Project Management - STAR Program (all) - DAWIA (all) Work-based: - Serve as Contracting Officer's Representative (J, S) - Serve as project engineer or project manager (J)	Gap Asse	- Currer	псу	=	Ga	p	

Career Area: Information Assurance

7 Competency: Contracting	Officers Representative (COR)	Profic	iency:	L	evel:	<u>:</u>	Skill Topics:
Strategic Value: To ensure contractor performance and delivery is in compliance with a given contract.	Learning Objectives: Knowledge of and ability to make technical decisions within the scope of the contract/task; serve as the day-to-day point of contact for contractual matters; assess the technical quality of performed work; approve deliverables for acceptance.	O 1 2 3 4	Required 0 1 2 3 4		X	S EX	- Deliverable item review and approval - Contract types (e.g., IDIQ, cost reimbursable, time and materials, firm fixed price) - Cost reporting - Contract rates - Delivery orders - Other direct costs (ODCs) - Contract Line Items (CLINs) - Contract milestones - Life cycle management - Statements of Work (SOW) - Contract options
	Developmental Opportunities: Learning: - STAR Program (all) - DAWIA (all)	Gap Asse	- Currer	псу	-	Gap	

Career Area: Information Assurance

8 <u>Competency:</u> Information	n Assurance	Profic	iency:		Leve	<u>: 1:</u>		Skill Topics:
Strategic Value: To acquire, maintain and ensure the security of information systems in an effective, interoperable, scalable, reliable, integrated and affordable fashion.	Learning Objectives: Knowledge of and ability to apply physical access controls, technical security countermeasures, classification and safeguarding of controlled information and operational & industrial security. Ability to validate that appropriate countermeasures are being integrated correctly into program and to ensure that assurance evidence that demonstrates that the system is secure are produced.	Current	Required 0 1 2 3 4	<u>E</u> .	<u>l</u> <u>J</u>	<u>S</u>	Ex X	
	Developmental Opportunities: Learning: - NETg Technical Training Courses (all) Work-based: - Partnering with Industry (all)	Gap Asse Required Proficiency	- Currer	nt =	=	Gap	p	

1 Competency: Systems De	ms Development Proficiency:							0.111.7
competency. Systems be	velopinent	FIOR	iericy.		LC	<u>vel:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	Ī	<u>J</u>	<u>S</u> <u>Ex</u>	- DoD policies and guidelines - Database architecture and DBMS
To ensure that systems being developed meet functional requirements, are maintainable, secure, reliable, recoverable, on schedule and within cost.	Knowledge of and ability to apply traditional and emerging design methodologies and programming services for developing information technology products and systems.	01234	01234			X	X	- Configuration management - Network architecture and software - Open systems and standards - CASE methodology and tools - Operating systems - Programming languages and coding - Object-oriented technology - Software, hardware and system testing - Quality assurance - Business Process Reengineering - Software reuse- Software metrics - Common criteria, DITSCAP
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (J) - NETg Technical Training Courses (all) - DAWIA systems engineering courses (all)	Gap Asse	ssment: - Currer Proficier	nt	=		 Sap	
	Work-based: - Include AIS Security controls during system development (J) - Analyze security software, hardware support tools (J) - Partnering with Industry (all) - Technical work in systems development (all)	Gap Mitig	ation Strate	egy:				

Job Role. Project Ma	mayement							
2 <u>Competency:</u> Systems Ac	quisition	<u>Profic</u>	<u>iency:</u>		Lev	<u>/el:</u>		Skill Topics:
Strategic Value: To ensure the organization's products and services reflect scalable customer requirements, both cost and technical, in a competitive environment, and to ensure these requirements are met through the acquisition process.	Learning Objectives: Knowledge of and ability to apply Federal, DoD and DON acquisition management guidance and analytical methods to formally plan, organize, direct and control the program and project acquisition process.	O 1 2 3 4	Required 0 1 2 3 4	<u>E</u>		X >	S Ex	Procurement processes Acquisition documentation Life-cycle management Economic analysis principles Activity-based costing DoD, DON budget and procurement processes BPR methodologies, metrics, tools, and techniques Plan and budgetary document development to support requirements Metrics and performance analysis Acquisition, Distribution and Disposal Federal laws and DoD, DON regulations
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (J) - NETg Technical Training Courses (all) - DAWIA program management courses (all) - Information Resources Management College, Information Management Planning (all) - Information Resources Management College, Information Technology Acquisition for the CIO (S, Ex) Work-based: - Include AIS Security controls during system development (J) - Analyze security software, hardware support tools (J) - Partnering with Industry (all) - Experience in acquisition programs (all)	Gap Asse Required Proficiency Gap Mitiga	- Currer	псу	=	G	ap	

3 <u>Competency:</u> Information	n Resource Management	<u>Profic</u>	iency:		Lev	<u>/el:</u>		Skill Topics:
Strategic Value: To ensure organization information resources are a strategic asset that will provide the backbone of DON information needs by utilizing information resource assets in the most advantageous manner.	Learning Objectives: Knowledge of and ability to manage information, information systems and related resources according to Federal laws and DoD, DON regulations.	O 1 2 3 4	Required 0 1 2 3 4	<u>E</u>	_	X X	X	- Information management - Information systems management - Related resource management - Project, program, contract and life-cycle management - Information resource management regulations, policies and procedures - Computer products and services analysis - Cost-benefit/economic analysis - Configuration management - Life-cycle cost analysis - Customer service
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (J) - NETg Technical Training Courses (all) - Information Resources Management College, Information Management Planning (all) - Information Resources Management College, Information Technology Acquisition for the CIO (S, Ex) Work-based: - Include AIS Security controls during system development (J) - Analyze security software, hardware support tools (J) - Partnering with Industry (all)	Gap Asse	- Currer	псу	=	Gá	пр	

4 Competency: Risk Manage	ement	Profic	iency:		Ιρ	evel:		Chill Tanias
- Competency. Kisk Wallay		TTOTIC	I I					Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	Ī	Ī	<u>S</u> <u>E</u> :	- Cross functional security disciplines (technical,
To evaluate information systems to identify residual risks to make recommendations to meet the appropriate organizational security requirements.	Knowledge of and ability to use methods and tools used for risk assessment and mitigation of risk to information systems and data.	01234	01234	×	X	X	×	
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (Certification & Accreditation)	Gap Asse	essment: - Currer		=	_		
	(all) - NSA TEMPEST Course (E, I) - DITSCAP Course (E) - CISN Training Pipeline (all) - Navy IA Training (E, I, J) - INFOCON Training (E, I) - Disaster Recovery Training (E, I)	Proficiency	-	ncy	=		зар	
	Work-based: - Include AIS security controls during system development (I) - Analyze security software, hardware support tools (I) - Conduct or assist in system risk assessments (I, J) - Conduct system vulnerability tests (J) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)							

_	nagement	Drofia	longu	Lovoli				
5 <u>Competency:</u> Business De	evelopment	<u>Profic</u>	<u>iency:</u>		Leve	<u>eı:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	<u>l</u> _	<u>J</u> <u>S</u>	<u>Ex</u>	- Marketing - Customer business requirements
To sustain the structure and operations of the organization within projected cost and revenue, and to ensure requirements for planned growth and technology insertion are met with adequate capital investment resources.	Knowledge of and ability to apply financial management, cost and revenue projections, business cases, plans, methods, practices, policies and procedures, industry trends and market surveys, justifications, approvals, determinations and findings.	01234	01234		<i>></i>	×		 Competitive proposal preparation and presentation Customer service Business case analysis Stakeholder mediation
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (J) - NETg Technical Training Courses (all) - Information Resources Management College, Information Management Planning (all) - Information Resources Management College, Information Technology	Gap Asse	- Currer	nt	=	Ga	ap	
	Acquisition for the CIO (S) - Managerial Accounting Course (all) - Financial management course (all) Work-based: - Include AIS Security controls during system development (J) - Analyze security software, hardware support tools (J) - Partnering with Industry (all)	Gap Mitig	ation Strate	<u>egy:</u>				

6 Competency: Quality Assu	irance	Profic	iency:		Lρν	vel:		OLULT'
competency. Quanty Asset	and the	<u>11011C</u>	iericy.					Skill Topics:
Strategic Value:	<u>Learning Objectives:</u>	Current	Required	<u>E</u>	1	<u> </u>	<u>S</u> <u>Ex</u>	- Stakeholder requirements - Testing processes and procedures
To design, develop and deploy high quality systems by employing tools and methods that manage the system evolution.	Knowledge of and ability to apply principles, methods and tools of quality assurance; includes translating functional requirements into technical requirements used for logical design or presenting alternative technologies or approaches.	01234	01234	X	X	×	×	- OT&E - DT&E - IV&V - Performance measurement - Software metrics - Design reviews
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training courses (all) - Center for Quality Management courses (all)	Gap Asse	ssment: - Currer Proficier		=	 G	iap	
	Work-based: - Include AIS Security controls during system development (I) - Analyze security software, hardware support tools (I) - Partnering with Industry (all)		ation Strate	,				

7 <u>Competency:</u> Configuration	on Management	<u>Profic</u>	iency:		Lev	vel:		Skill Topics:
Strategic Value: To ensure sound configuration management processes are established for information systems, to document mission support software and systems and to manage the configuration of existing networks.	Learning Objectives: Knowledge of and ability to identify, track (status accounting), control, and document information and physical characteristics of an information system or product (including documentation during a system's life cycle).	O 1 2 3 4	Required 0 1 2 3 4	<u>E</u>	_	_	x Ex	- Configuration management tools and methods - Tracking (status accounting), controlling and documenting information and physical characteristics of an information system or product - Configuration reviews and functional and physical auditing - DoD policies and guidelines - Protection of software (trusted)
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (J) - NETg Technical Training Courses (all) - Information Resources Management College, Managing Information Architectures and Infrastructures (all) Work-based: - Include AIS Security controls during system development (J) - Analyze security software, hardware support tools (J) - Partnering with Industry (all)	Gap Asse	- Currer	nt ncy	=	G	ap	

8 Competency: Program Ma	anagement	<u>Profic</u>	iency:		Lev	<u>el:</u>		Skill Topics:
Strategic Value: To achieve the needed outcomes of a specific program and related projects by ensuring proper management, performance and administration.	Learning Objectives: Knowledge of the required outcomes, functional and political environments, organizations, activities, and constraints affecting a program. Knowledge of project definition and the ability to: relate required results and costs; lead teams that include members not in one's chain of command; apply systematic thinking to develop action plans; develop approaches to satisfy requirements and resolve issues; and ensure overall project quality. A PM has the knowledge and ability to coordinate the work of assigned staff and other functional experts matrixed to support the task.	O 1 2 3 4	Required 0 1 2 3 4	<u>E</u> .	_	<u> </u>	X	- Program strategic planning - Program role in organization/enterprise - Visionary leadership - Performance assessment - Project integration management - Quality management - Risk management - Financial management
	Developmental Opportunities: Learning: - Information Resources Management College: (J, S)Information Management PlanningInformation Technology Acquisition for the CIOIT Project Management- STAR Program (all) - DAWIA (all) Work-based: - Serve as Contracting Officer's Representative (J, S) - Serve as project engineer or project manager (J)	Gap Asse	- Currer	псу	=	Ga	p	

9 <u>Competency:</u> Contracting	Officers Representative (COR)	<u>Profic</u>	iency:		<u>Le</u>	vel:		Skill Topics:
Strategic Value: To ensure contractor performance and delivery is in compliance with a given contract.	Learning Objectives: Knowledge of and ability to make technical decisions within the scope of the contract/task; serve as the day-to-day point of contact for contractual matters; assess the technical quality of performed work; approve deliverables for acceptance.	O 1 2 3 4	Required 0 1 2 3 4	_	_		S Ex	- Deliverable item review and approval - Contract types (e.g., IDIQ, cost reimbursable, time and materials, firm fixed price) - Cost reporting - Contract rates - Delivery orders - Other direct costs (ODCs) - Contract Line Items (CLINs) - Contract milestones - Life cycle management - Statements of Work (SOW) - Contract options
	Developmental Opportunities: Learning: - STAR Program (all) - DAWIA (all)	Gap Asse	- Currer	nt ncy	= =	(Gap	

10 Competency: Information	Assurance	<u>Profic</u>	iency:		Le	vel:		Skill Topics:
Strategic Value:	<u>Learning Objectives:</u>	Current	Required	<u>E</u>	1	<u>J</u>	<u>S</u> <u>E</u> :	· - Information Systems Security
To acquire, maintain and ensure the security of information systems in an effective, interoperable, scalable, reliable, integrated and affordable fashion.	Knowledge of and ability to apply physical access controls, technical security countermeasures, classification and safeguarding of controlled information and operational & industrial security. Ability to validate that appropriate countermeasures are being integrated correctly into program and to ensure that assurance evidence that demonstrates that the system is secure are produced.	01234	01234	X	X	X	×	 National Level IM/IT Policy Trusted Systems Discretionary and Mandatory Access Control Identification and Authentication Common criteria, DITSCAP Assurance Evidence
	Developmental Opportunities: Learning: - NETg Technical Training Courses (all) Work-based:	Gap Asse	-		=	_		
	- Partnering with Industry (all)	Required Proficiency	_ Currer Proficier		=	G	iap	
		Gap Mitig	ation Strate	egy:				

Career Area: Information Assurance

Sob Role. Research								
1 <u>Competency:</u> Basic Resea	ırch	<u>Profic</u>	<u>iency:</u>		<u>Lev</u>	<u>el:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	<u>l</u> .	<u>J</u> <u>S</u>	<u>Ex</u>	
To conduct basic research to support future DON information systems.	Knowledge of and ability to conduct cutting edge research and apply it to future DON needs.	01234	01234		>	X		- Literature searches - Cooperative Research and Development Agreements (CRADAs) - Technical speech and presentation - Proposal development
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (J) - Classes for background as needed for new research topics (all) Work-based: - Conferences, workshops, presenting papers (all) - Professional study, journals (all) - Professional association membership (all) - Program Chair / Committees (all) - Dissertation committees (all) - Organizational trends (S, Ex) - Evaluating proposals (S, Ex)	Gap Asse Required Proficiency	- Currer	nt :	=	Ga	mp	

Career Area: Information Assurance

2 <u>Competency:</u> Applied Res	earch	<u>Profic</u>	iency:	J	_eve	<u>el:</u>		Skill Topics:
Strategic Value: To apply basic research in support of future DON information systems.	Learning Objectives: Knowledge of and ability to conduct and apply cutting edge research and apply it to future DON needs.	O 1 2 3 4	Required 0 1 2 3 4	<u>E</u> !	_	<u>S</u> X	_	- Requirements analysis - Customer functional and infrastructure analysis - Customer information management - Customer requirements - Converting research into prototype systems - Transitioning from prototype systems to engineering development models - Test & Evaluation - Product design - Systems integration - CRADAs - Liaison with universities, industry
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (J) Work-based: - Conferences, workshops, presenting papers (all) - Professional study, journals (all) - Professional association membership (all) - Program Chair / Committees (all) - Dissertation committees (all) - Organizational trends (S, Ex) - Evaluating proposals (S, Ex) - Investigate potential applications (all)	Gap Asse	ssment: Curren Proficier	ncy		Ga	p	

Career Area: Information Assurance

3 Competency: Advanced C	oncept Technology Demonstration	<u>Profic</u>	iency:	L	evel:		Skill Topics:
Strategic Value: To develop prototypes of advanced technology for use in future DON information systems.	Learning Objectives: Knowledge of and ability to apply cutting edge research into advanced concept technology demonstrations.	O 1 2 3 4	Required 0 1 2 3 4		X	S EX	- Demonstrations and validation - Customer requirements and support - Training - Graphical User Interface improvement - Incremental development - System integration and management - Proposal development
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) Work-based: - Conferences, workshops, presenting papers (all) - Professional study, journals (all) - Professional association membership (all) - Program Chair / Committees (all) - Dissertation committees (all) - Organizational trends (S, Ex) - Evaluating proposals (S, Ex) - Investigate potential applications (all)	Gap Asse	ssment: - Currer Proficien	ncy	(Sap	

Career Area: Information Assurance

	. A L :						
4 <u>Competency:</u> Requiremen	nts Analysis	<u>Profic</u>	<u>iency:</u>		Level	<u>:</u>	Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u> <u>!</u>	<u> </u>	<u>S</u> <u>Ex</u>	- DoD mission, organization and roles
To ensure stakeholder (e.g. customers, end-users) requirements are incorporated in the systems engineering of information systems.	Knowledge of and ability to analyze, identify, specify and manage functional and infrastructure requirements needed to achieve customer, organization and DON goals.	01234	01234	X	X	X	- DoD Components' (Services and Agencies) missions, organizations and roles - Unified Command structure, mission and roles - Mission support requirements - Analysis tools and methods - Stakeholder requirements - Operations and logistics requirements - Security requirements
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - Attend course on Requirements Specification (E, I)	Gap Asse	ssment: - Currer	= nt =	-	Gap	
	Work-based: - Serve as an Information System Security Officer (ISSO) or assist the ISSO (J) - Analyze security software, hardware support tools (I) - Conduct or assist in system risk assessments (I, J) - Conduct system vulnerability tests (J) - Partnering with Industry (all) - Work on specification writing team (E, I, J)	Proficiency Gap Mitig	Proficier ation Strate	,			

Career Area: Information Assurance

5 <u>Competency:</u> Modeling ar	nd Simulation	<u>Profic</u>	iency:	J	Leve	el:		Skill Topics:
Strategic Value: To evaluate and assess evolving information systems and to ensure greater efficiency, improved service, and cost effective operations.	Learning Objectives: Knowledge of and ability to apply modeling and simulation tools and techniques to characterize systems of interest, to support decisions involving requirements, to evaluate design alternatives, to support training, or to support operational preparation.	O 1 2 3 4	Required 0 1 2 3 4	_	(X	_	Ex	 Analytic modeling (includes methods and tools) Time-step simulation Event-step simulation Trace capture/playback Remote terminal emulation Database sampling Test data generators Protocols for federated models (e.g., DIS, ALSP, HLA) Simulation-based design
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - Attend M&S conferences (I, J) Work-based: - Serve as an Information System Security Officer (ISSO) or assist the ISSO (J) - Analyze security software, hardware support tools (I) - Conduct or assist in system risk assessments (I, J) - Conduct system vulnerability tests (J) - Partnering with Industry (all) - Visiting other DoD/civilian sites to learn about modeling and simulation (all)	Gap Asse	- Currer	псу		Ga	p	

Career Area: Information Assurance

6 <u>Competency:</u> Program Ma	nagement	<u>Profic</u>	iency:	<u> </u>	_eve	<u>l:</u>		Skill Topics:
Strategic Value: To achieve the needed outcomes of a specific program and related projects by ensuring proper management, performance and administration.	Learning Objectives: Knowledge of the required outcomes, functional and political environments, organizations, activities, and constraints affecting a program. Knowledge of project definition and the ability to: relate required results and costs; lead teams that include members not in one's chain of command; apply systematic thinking to develop action plans; develop approaches to satisfy requirements and resolve issues; and ensure overall project quality. A PM has the knowledge and ability to coordinate the work of assigned staff and other functional experts matrixed to support the task.	O 1 2 3 4	Required 0 1 2 3 4	<u>E</u> 1	X X	_	X	 Program strategic planning Program role in organization/enterprise Visionary leadership Performance assessment Project integration management Quality management Risk management Financial management
	Developmental Opportunities: Learning: - Information Resources Management College: (J, S)Information Management PlanningInformation Technology Acquisition for the CIOIT Project Management - STAR Program (all) - DAWIA (all) Work-based: - Serve as Contracting Officer's Representative (J, S) - Serve as project engineer or project manager (J)	Gap Asse	- Currer	ncy		Gal	р	

Career Area: Information Assurance

	Officers Representative (COR)	<u>Profic</u>	iency:		Leve	<u>:</u>		Skill Topics:
Strategic Value: To ensure contractor performance and delivery is in compliance with a given contract.	Learning Objectives: Knowledge of and ability to make technical decisions within the scope of the contract/task; serve as the day-to-day point of contact for contractual matters; assess the technical quality of performed work; approve deliverables for acceptance.	Current 0 1 2 3 4	Required 0 1 2 3 4	E .	X X	_	<u>Ex</u>	·
	Developmental Opportunities: Learning: - STAR Program (all) - DAWIA (all)	Gap Asse	- Currer	nt =	=	Gap	p	

Career Area: Information Assurance

8 <u>Competency:</u> Information	Assurance	<u>Profic</u>	iency:		Le	vel:		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	-	_	_	<u>S</u> <u>E</u> :	
To acquire, maintain and ensure the security of information systems in an effective, interoperable, scalable, reliable, integrated and affordable fashion.	Knowledge of and ability to apply physical access controls, technical security countermeasures, classification and safeguarding of controlled information and operational & industrial security. Ability to validate that appropriate countermeasures are being integrated correctly into program and to ensure that assurance evidence that demonstrates that the system is secure are produced.	01234	01234	X	X	X	×	
	<u>Developmental Opportunities:</u> Learning: - NETg Technical Training Courses (all)	Gap Asse	ssment:		=			
	Work-based: - Partnering with Industry (all)	Required Proficiency	_ Currer Proficier		=	G	iap	
		Gap Mitiga	ation Strate	egy:				

Career Area: Information Assurance

		D C	•			1		
1 <u>Competency:</u> Risk Assess	ment and Mitigation	<u>Profic</u>	<u>iency:</u>		<u>Le</u>	<u>vel:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	1	<u>J</u>	<u>S</u> <u>E</u> :	- Cross functional security disciplines (technical,
To evaluate information systems to identify residual risks to make recommendations to meet the appropriate organizational security requirements.	Knowledge of and ability to use methods and tools used for risk assessment and mitigation of risk to information systems and data.	01234	01234	X	X	X	×	administrative, personnel, physical) - Risk management policies and procedures - Hardware/software risks and vulnerabilities - Risk management methods and tools
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (Certification & Accreditation)	Gap Asse	essment: - Currer		=	_		
	(all) - NSA TEMPEST Course (E, I) - DITSCAP Course (E) - CISN Training Pipeline (all) - Navy IA Training (E, I, J) - INFOCON Training (E, I) - Disaster Recovery Training (E, I)	Proficiency	-	ncy	_		σαμ	
	Work-based: - Include AIS security controls during system development (I) - Analyze security software, hardware support tools (I) - Conduct or assist in system risk assessments (I, J) - Conduct system vulnerability tests (J) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)							

Career Area: Information Assurance

	gement								
2 <u>Competency:</u> Vulnerabilit	y Assessment Tools and Techniques	<u>Profic</u>	<u>iency:</u>		<u>Le</u>	evel:			Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	1	<u>J</u>	<u>S</u> <u>!</u>	<u>Ex</u>	- Cryptography - System/Network vulnerabilities
To assess the risk to information systems and networks from attack and/or intrusion; to recommend safeguards and protections to manage and mitigate risks.	Knowledge of and ability to use tools and techniques for assessing risks to information systems.	01234	01234	X	X	X			- Commercial assessment tools and products - Logical network traffic requirements - Physical network vulnerabilities - Authentication, Authorization, and Accounting Requirements - Firewall Recommendations - Remote Access Verifications Requirements - Internet Access Security Solutions - Vulnerability Testing
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (all) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (All) - Personnel Security Courses (E, I) - Physical Security Courses (E, I) - IAVA Training (E, I) - INFOCON Training (E, I) - DITSCAP Course (E)	Gap Asse ——— Required Proficiency Gap Mitiga	- Currer	ncy	=		Gap		
	Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct/assist in system risk assessments (I, J) - Perform/ assist security certification and accreditation (I, J) - Partnering with Industry (all)								

Career Area: Information Assurance

Compotoncy: Information	3 Competency: Information Systems Security Certification Proficiency:						
<u>competency:</u> Information	r systems security certification	PIONE	iency:		Leve	<u>l.</u>	Skill Topics:
Strategic Value: To develop certification and accreditation plans and procedures, document deficiencies, report corrective actions, and recommend changes to improve the security of information systems; to serve as the test director in the execution of test procedures; to determine inherent risks in system design and existing countermeasures; to improve	Learning Objectives: Knowledge of and ability to provide technical evaluation of information systems security features and other safeguards (in the support of the accreditation process) to establish the extent to which a particular information system design and implementation meets a set of specified security requirements.	O 1 2 3 4	Required 0 1 2 3 4	X	X X X	<u>S</u> <u>E</u>	risk assessment
efficiency and productivity of information systems; to interpret National, DOD and DON information security policies; to ensure information systems that are developed, procured, and installed adhere to information security standards and regulations.	Developmental Opportunities: Learning: - IRMC, Managing Information Security (E, I, J) - NETg Technical Training Courses - ISA Course, NSVT Course - NSA COMSEC/COMPUSEC/INFOSEC Course - NSA TEMPEST Course - CISN Training Pipeline - Personnel Security Courses - Physical Security Courses - IAVA Training - INFOCON Training Work-based: - Serve as the DAA/Certification Authority (S, Ex) - Serve as the ISSM or NSM (J, S) - Serve as or assist an Info System Security Officer (I, J) - Serve as NSO or TASO (E, I) - Develop security plans and/or policies (J, S) - Conduct/assist system risk assessments (I, J) - Perform/assist certification/accreditation (I, J) - Partnering with Industry (all)	Gap Asse Required Proficiency Gap Mitig	- Currer	nt ncy	= =	Gap	- Data security management - Emissions security (TEMPEST) - Telecommunications security practices - Information systems security compliance reviews - Certification and accreditation planning - Security test and evaluation plans and procedures - Risk analysis for new/legacy IM/IT systems/networks - Life cycle management documentation - Commercial hardware/software technical studies - Product procurement documentation - Performance measurement studies - Operational requirements - Cryptography

Career Area: Information Assurance

4 Competency: Information	Security/Information Assurance Policy	<u>Profic</u>	iency:		Le	vel:		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>			6 <u>Ex</u>	- Methods/procedures to identify
To protect National assets and resources; to formulate information systems security policies and recommendations to the Designated Approval Authority (DAA); to guide projects through the life cycle management; to provide user technical assistance; to perform management review, validate security requirements, and meet the DON's requirements within cost and performance requirements.	Learning Objectives: Knowledge of and ability to apply information systems security laws, policies, directives, regulations, guidance and procedures. Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (E, I, J) - NETg Technical Training Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (all) - Personnel Security Courses (E, I) - IAVA Training (E, I) - INFOCON Training (E, I) - DITSCAP Course (E) Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct or assist in system risk assessments (I, J) - Perform/assist security certification and accreditation (I, J) - Partnering with Industry (all)	Gap Asse	01234	X nt	_	X	(X	- Methods/procedures to Identify purchase, distribute, and maintain IM/IT assets in a secure manner - System operations life cycle - Network operations life cycle - System/Network certification process using DoD DAA - Applicable Federal, DoD and DON information resource management policies, laws and regulations - Information System security requirements definition - Federal, DoD and DON life cycle management policies - Cryptography - System/Network vulnerabilities

Career Area: Information Assurance

5 Competency: Contingence	y and Disaster Recovery Tools and Techniques	<u>Profic</u>	<u>iency:</u>		<u>Le</u>	evel:	<u>.</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	1	<u>J</u>	<u>S</u>	<u>Ex</u>	- Contingency/Recovery Plans - Crisis Communications
To restore information systems, networks and data to normal operations following contingencies, attacks and/or intrusion.	Knowledge of and ability to use tools and techniques to restore information systems, networks and data to a normal state following a contingency, attack and/or intrusion.	01234	01234	X	X	X			- Data Backup Procedures - Computer viruses and protection - Operating Systems - Network Topologies - Vulnerability Assessment - Threat Remediation and Mitigation - Incident Response Management - Information Infrastructure Loss Reconstitution
	Developmental Opportunities: Learning: - Information Resources Management College, Managing Information Security (all) - NETg Technical Training Courses (all) - CIP Courses (all) - ISA Course (E, I) - NSVT Course (I, J) - NSA COMSEC/COMPUSEC/INFOSEC Course (all) - NSA TEMPEST Course (E, I) - CISN Training Pipeline (All) - Personnel, Physical Security Courses (E, I) - IAVA Training (E, I) - INFOCON Training (E, I) - DITSCAP Course (E) Work-based: - Serve as/assist Information System Security Officer (J) - Develop security plans and/or policies (J, S) - Conduct/assist in system risk assessments (I, J) - Perform/assist security certification/accreditation (I, J) - Partnering with Industry (all)	Gap Asse Required Proficiency	- ————————————————————————————————————	ncy	= =		Gap	-	

Career Area: Information Assurance

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6 <u>Competency:</u> Architecture	9	Proficiency:	<u>Level:</u>	Skill Topics:
Strategic Value: To develop and maintain secure information systems and networks that are effective, interoperable, integrated and affordable.	Learning Objectives: Understanding the operational, systems and technical views of the architecture framework endorsed by DoD, and their application in computer and information systems components.	Current Required 0 1 2 3 4 0 1 2 3 4	X X X X X	- OMB Memo M-97-16 - C4ISR architecture framework - Process modeling - Data interchange services - Computer systems architecture - System design, including hardware components and configuration - Database management - Distributed processing - Operating Systems - Networks - Systems software - Technical Standardstheir role and specific standards in use and adopted by DoD and DON - Cryptographic equipment and
	Developmental Opportunities: Learning: - NETg Technical Training Courses (all) - Information Resources Management College, Managing Information Security (E, I, J) - Information Resources Management College, Managing Information Architectures and Infrastructures (all) Work-based: - Include AIS Security controls during system development (I) - Analyze security software, hardware support tools (I) - Partnering with Industry (all)	Gap Assessment:	ncy	systems - DoD Security Architecture (MSL) - Cryptography

Career Area: Information Assurance

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7 <u>Competency:</u> Network/Sy	ystems Security Operations	<u>Profic</u>	<u>iency:</u>		Leve	<u>el:</u>		Skill Topics:
Strategic Value: To protect and restore the security of information systems and network services and capabilities; identify and eliminate information systems vulnerabilities to inadvertent disclosure, modification, destruction, or denial of service.	Learning Objectives: Knowledge of and ability to develop, evaluate, coordinate and disseminate security tools and procedures.	O 1 2 3 4	Required 0 1 2 3 4	X	X X	_	<u>Ex</u>	- Security operations Techniques and procedures - Troubleshooting - Requirements Documentation - Systems Analysis - Standard Data Elements and Codes - Cryptography
	Developmental Opportunities: Learning: - NETg Technical Training Courses (all) - Information Resources Management College, Managing Information Security in a Networked Environment (all) Work-based: - Serve as an Information System Security Officer (ISSO) or assist the ISSO (J) - Analyze security software, hardware support tools (I) - Conduct or assist in system risk assessments (I, J) - Conduct system vulnerability tests (J) - Partnering with Industry (all)	Gap Asse	- Currer	ncy	=	Gap	0	

Career Area: Information Assurance

8 <u>Competency:</u> AIS Life Cyc	cle Management	Proficiency: Level:				Skill Topics:		
Strategic Value: To ensure adherence to Federal law and DOD Life Cycle regulations in the acquisition, maintenance, operation and disposal of required hardware, support services and other materials.	Learning Objectives: Ability to acquire required hardware, software, support services and other materials.	O 1 2 3 4	Required 0 1 2 3 4	<u>E</u> .	_	<u>S</u> X		 Project Planning AIS Life Cycle Management Security policies, standards, methodologies, tools Cryptography
	Developmental Opportunities: Learning: - NETg Technical Training Courses (all) - Information Resources Management College, Managing Information Security (I, J) - Information Resources Management College, Information Management Planning (S) Work-based: - Develop security plans and/or policies (J, S) - Perform or assist in system security certification and accreditation (I, J) - Partnering with Industry (all)	Gap Asse	- Currer	псу		Gap	p	

Career Area: Information Assurance

9 <u>Competency:</u> Program Ma	anagement	<u>Profic</u>	iency:		<u>Lev</u>	<u>/el:</u>		Skill Topics:
Strategic Value: To achieve the needed outcomes of a specific program and related projects by ensuring proper management, performance and administration.	Learning Objectives: Knowledge of the required outcomes, functional and political environments, organizations, activities, and constraints affecting a program. Knowledge of project definition and the ability to: relate required results and costs; lead teams that include members not in one's chain of command; apply systematic thinking to develop action plans; develop approaches to satisfy requirements and resolve issues; and ensure overall project quality. A PM has the knowledge and ability to coordinate the work of assigned staff and other functional experts matrixed to support the task.	O 1 2 3 4	Required 0 1 2 3 4	<u>E</u>	_	X X	X	- Program strategic planning - Program role in organization/enterprise - Visionary leadership - Performance assessment - Project integration management - Quality management - Risk management - Financial management
	Developmental Opportunities: Learning: - Information Resources Management College: (J, S)Information Management PlanningInformation Technology Acquisition for the CIOIT Project Management - STAR Program (all) - DAWIA (all) Work-based: - Serve as Contracting Officer's Representative (J, S) - Serve as project engineer or project manager (J)	Gap Asservation	- Currer	псу	=	Gá	пр	

Career Area: Information Assurance

10 Competency: Contracting	Officers Representative (COR)	<u>Profic</u>	iency:		<u>Level:</u>			Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u> .	<u>l</u> <u>J</u>	<u>J</u> <u>S</u>	<u>Ex</u>	
To ensure contractor performance and delivery is in compliance with a given contract.	Knowledge of and ability to make technical decisions within the scope of the contract/task; serve as the day-to-day point of contact for contractual matters; assess the technical quality of performed work; approve deliverables for acceptance.	01234	01234		×	X		approval - Contract types (e.g., IDIQ, cost reimbursable, time and materials, firm fixed price) - Cost reporting - Contract rates - Delivery orders - Other direct costs (ODCs) - Contract Line Items (CLINs) - Contract milestones - Life cycle management - Statements of Work (SOW) - Contract options
	Developmental Opportunities: Learning: - STAR Program (all) - DAWIA (all)	Gap Asse Required Proficiency	ssment: - Currer Proficier	 nt =	=		ip	
		Gap Mitig	ation Strate	egy:				

Career Area: Information Assurance

	gement							
11 <u>Competency:</u> Information	n Assurance	<u>Profic</u>	<u>iency:</u>		<u>Le</u>	<u>vel:</u>		Skill Topics:
Strategic Value:	Learning Objectives:	Current	Required	<u>E</u>	<u>I</u>	<u>J</u> ?	<u> Ex</u>	- Information Systems Security - Systems Analysis
To maintain and ensure the security of information systems in an effective, interoperable, scalable, reliable, integrated and affordable fashion.	Knowledge of and ability to apply physical access controls, technical security countermeasures, classification and safeguarding of controlled information and operational & industrial security.	01234	01234			X		 Systems Analysis Systems Operation Systems Evaluation Systems Certification Countermeasures Internal and External Technical Advisement National Level IM/IT Policy Cryptography
	Developmental Opportunities: Learning: - NETg Technical Training Courses (all) - Information Resources Management College, Managing Information Security (E, I, J) - DITSCAP Course (E) Work-based: - Serve as an Information System Security Officer (ISSO) or assist the ISSO (J) - Develop security plans and/or policies (J, S) - Analyze security software, hardware support tools (I) - Conduct or assist in system risk assessments (I, J) - Conduct system vulnerability tests (J) - Perform/assist in security certification/accreditation (I, J) - Partnering with Industry (all)	Gap Asse ——— Required Proficiency Gap Mitig	ssment: - Currer Proficien	ncy	= =	G	ар	